REMARKS

The Official Action mailed April 22, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statement filed on April 15, 2001.

Claims 1-10 and 12-29 were pending in the present application prior to the above amendment. Claim 1 has been amended to better recite the features of the present invention, claims 1, 5, 6, 10, 12, 16, 20-22 and 25 have been amended to correct minor typographical and grammatical informalities, and new claims 30-42 have been added to recite additional protection to which the Applicants are entitled. Claims 7-9, 13 and 16-29 have been withdrawn from consideration by the Examiner (Office Action Summary, Paper No. 041505). Accordingly, claims 1-6, 10, 12, 14, 15 and 30-42 are currently elected, of which claims 1, 5, 10, 30 and 36 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action rejects claims 1-4 as anticipated by Figures 5, 6 and 12B of the Applicants' specification, referred to as "applicant's admitted prior art" or "prior art admitted by applicant" in the Official Action. The Applicants respectfully traverse the rejection because the Official Action has not established an anticipation rejection.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The Applicants respectfully submit that an anticipation rejection cannot be maintained against the independent claims of the present application.

The Official Action asserts that Figures 5, 6 and 12B disclose a "thin film transistor, clock lines, two layer structures and the lower layer extends in a same direction as the upper layer" (page 2, Paper No. 041505). For example, the Official Action asserts that "a lower layer (1114) is a gate electrode and an upper layer (1111, 1112) is a source and drain electrode" (page 3, Id.). In addition, the Official Action asserts that the "lower layer (gate 1114) extends in a same direction as the upper layer (see Fig. 12B)" (Id.). The Applicants respectfully disagree and traverse the above-referenced assertions in the Official Action.

The Official Action appears to misinterpret or misunderstand Figure 12B. Figure 12B shows a cross-sectional view of gate electrode wiring line 1114, which is a lower layer and which extends in a direction parallel to a plane of the page, and a cross-sectional view of source electrodes 1111 and 1112, which are upper layers and which extend in a direction perpendicular to the plane of the page.

Also, Figure 6 shows a line (not numbered) connected to clock line 501, which corresponds to gate electrode wiring line 1114 of Figure 12B, and clock line 502 itself corresponds to source electrode 1112 of Figure 12B. The clock line 502 crosses over the line (not numbered) connected to clock line 501. Similarly, source electrode (upper layer) 1112 crosses over gate electrode wiring line (lower layer) 1114 in Figure 12B. Therefore, source electrode (upper layer) 1112 extends in a different direction than gate electrode wiring line (lower layer) 1114.

On the other hand, independent claims 1 and 10 recite that a lower layer of a two-layer structure extends in a same direction as an upper layer of the two-layer structure. For example, claim 1 may be illustrated as shown in Figure 12A. In Figure 12A shows a cross-sectional view of gate electrodes (lower layers) 1104, 1105, which extend in a direction perpendicular to a plane of the page, and a cross-sectional view of source electrodes (upper layers) 1107, 1108, which also extend in a direction perpendicular to the plane of the page.

Also, Figure 1 shows that clock line 101 has two layers, and that the two layers extend in the same direction. Therefore, gate electrodes (lower layers) 1104, 1105 extend in a same direction as source electrodes (upper layers) 1107, 1108.

In view of the above, the Applicants respectfully submit that Figures 5, 6 and 12B do not teach that a lower layer of a two-layer structure extends in a same direction as an upper layer of the two-layer structure, either explicitly or inherently.

Further, claim 1 has been amended to clarify a feature of the present invention. Specifically, claim 1 has been amended to recite "at least one wiring line crossing the clock lines" and that "said wiring line formed over the upper layer is connected to the upper layer," which is supported in the specification, for example, by Figures 1 and 12A. For example, in Figure 1, a wiring line connected to clock line 101 crosses over clock lines 102-106, and, in Figure 12A, a wiring line 1101 is formed over upper layer 1107, 1108. Figures 5, 6 and 12B also do not teach at least one wiring line crossing clock lines and that a wiring line formed over an upper layer is connected to the upper layer, either explicitly or inherently.

Since Figures 5, 6 and 12B does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

Paragraph 6 of the Official Action rejects claims 10, 12, 14 and 15 as obvious based on the combination of Figures 5, 6 and 12B and U.S. Patent No. 5,994,765 to Mitra et al. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the

prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Please incorporate the arguments above with respect to the deficiencies in Figures 5, 6 and 12B. Mitra does not cure the deficiencies in Figures 5, 6 and 12B. The Official Action relies on Mitra to allegedly teach a shielding line (page 4, Paper No. 041505). However, Figures 5, 6 and 12B and Mitra, either alone or in combination, do not teach or suggest that a lower layer of a two-layer structure extends in a same direction as an upper layer of the two-layer structure.

Since Figures 5, 6 and 12B and Mitra do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 7 of the Official Action rejects claims 5 and 6 as obvious based on the combination of Figures 5, 6 and 12B and U.S. Patent No. 6,175,395 to Yamazaki et al.

There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Figures 5, 6 and 12B and Yamazaki or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that

the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

The Official Action concedes that Figures 5, 6 and 12B do not teach "black matrices over the thin film transistors" (page 5, Paper No. 041505). More specifically, the Official Action appears to concede that Figures 5, 6 and 12B do not teach a black matrix over a TFT of a driver circuit. The Official Action relies on Yamazaki to allegedly teach "a black matrix formed over the driver circuit region wherein said wiring lines [comprise] the same layer as the black matrices" (Id., citing column 2, lines 23-25 and 63-65, and column 3, lines 24-25 of Yamazaki). The Official Action asserts that "it would have been obvious to one of ordinary skill in the art at the [time] the invention was made to have used the black matrix as taught by Yamazaki ... on the driving circuit wiring of prior art admitted by applicant since the black matrix ... of Yamazaki can shield the light for both driving ... circuits" (Id.). The Applicants respectfully disagree and traverse the above assertions in the Official Action.

The Official Action has not shown how one of ordinary skill in the art would have combined Figures 5, 6 and 12B and column 2, lines 23-25 and 63-65, and column 3, lines 24-25 of Yamazaki at the time of the present invention. Column 2, lines 23-25 and

63-65, and column 3, lines 24-25 of Yamazaki appear to refer to a black matrix on TFTs of a driver circuit, such as "a black matrix 16 for a pixel region 14 of a TFT substrate 11 so as to be adjacent to ITO electrodes 17 and form a black matrix 18 for driver circuit regions 13 on an opposed substrate, as shown in FIG. 12" (column 2, line 66 to column 3, line 2). However, the Official Action has not shown why black matrix 16 or 18 of Figure 12 of Yamazaki should be combined with the structure shown in Figures 5, 6 and 12B. Also, it is not clear why one of ordinary skill in the art who was concerned with shielding light for driving circuits would not have simply practiced Yamazaki alone. Therefore, the Official Action has not shown sufficient motivation in Figures 5, 6 and 12B or Yamazaki to teach or suggest that the references could or should be combined.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

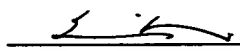
For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New claims 30-42 have been added to recite additional protection to which the Applicants are entitled. Independent claim 30 recites that a wiring line is formed over first and second insulating films, and an upper layer is formed between the first and second insulating films, which is supported in the specification, for example, by Figure 12A. Claim 30 also recites that a lower layer extends in a same direction as an upper layer, which is discussed above. Independent claim 36 recites that a wiring line is formed over first and second insulating films, an upper layer is formed between the first and second insulating films, and the second insulating film is thicker than the first insulating film, which is supported in the specification, for example, at page 15, lines 9-

15. The Applicants respectfully submit that new claims 30-42 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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